

MEDICINE

Rheumatism Can Be Cured By Early, Adequate Treatment

Arthritis Never Kills But Affects Fifteen Times As Many Over 40 as Does Tuberculosis; Is Costly

RHEUMATISM can be cured if patients are treated sufficiently early and thoroughly.

And rest and freedom from worry are the most important features in the regimen that American Public Health Association members in New York were urged to apply in order that this disease may be battled with effectiveness equal to that of the tuberculosis campaign.

A rest cure for the rheumatic in a specially equipped sanitarium was urged by Drs. Edward F. Hartung, William Von Stein and Margaret Straub Neil, of the New York Post Graduate Hospital and Graduate School. The rheumatism or arthritis patient needs this type of care just as much as the tuberculosis patient. Home and clinic treatment, all that is now available, is not so satisfactory.

In addition to rest and freedom from worry, these measures are recommended:

Exercise and massage, carefully adapted to each patient's needs; correction of posture defects, infected teeth, and digestive disorders; sunshine or ultra-violet light treatment.

Arthritis never kills, consequently it gets little attention from health work-

ers, doctors and the public. But this disease always cripples unless treated in time. More than twice as many persons of all ages suffer from arthritis as from tuberculosis. After the age of 40 more than 15 times as many suffer from arthritis as from tuberculosis.

Arthritis or rheumatism causes more time lost from work than diabetes, cancer or hardening of the arteries. One case of rheumatism in a family may take more than half the family income to pay for treatment and in loss of income because of disability.

The deformities caused by rheumatism could be prevented if the patients got treatment after the bone changes occurred but before crippling set in. Even those already crippled can be helped to regain some use of their disabled hands or legs.

The treatment takes a long time, just as in tuberculosis. From six months to two years may be necessary. Unfortunately, the New York doctors pointed out, there are no such sanatoria where the rheumatism patients can get this treatment for nothing or at slight cost, as there are for tuberculosis patients.

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COLUMNAR CRYSTALS

Suggesting the lines of a modern skyscraper, this group of crystals of stibnite (antimony sulfide) from Ichinakawa, Japan, shows the great beauty of mineral crystals. Once prized as a cosmetic, and still used by Arabian women as eyeshadow, this mineral supplies the metal antimony, which is used in type-metal to control the shrinkage rate and insure sharp type. Metallic-appearing when first mined, these crystals become dull after exposure to light. This specimen is on exhibition at the Philadelphia Academy of Sciences. Stibnite is mined in Iyo province, Japan; Haut-Loire, France; Baia Sprie, Rumania, and Altar, Sonora, Mexico.

GENETICS

Artificial Fertilization Used On Gnat-Sized Insects

ARTIFICIAL fertilization methods have been successfully applied for the first time to tiny fruit-flies or *Drosophila*, insects no larger than gnats, by Dr. G. Gottschewski of the Kaiser-Wilhelm Institute for Biology, Berlin-Dahlem, at present working in the laboratories of the California Institute of Technology. Methods of this kind have been heretofore used to some extent with cattle, sheep, and other mammals; experimentally also with poultry; but the smallest animal hitherto artificially inseminated has been the queen honey bee

—a creature gigantic in comparison with *Drosophila*.

The procedure involves a sort of little tragic triangle. To obtain the male fertilizing fluid, it is necessary to permit a normal mating to take place. Then the female is killed and the sperm is removed from her body with the more-than-hair-fine glass tube of a micro-manipulator. It is then introduced into the body of an unmated female. The whole process has to be carried out under a microscope, and thus far the percentage

of successful transfers of sperm has been relatively low.

The significance of Dr. Gottschewski's experiments is entirely scientific, but the results may be very important in the field of genetics. *Drosophila* is classic material for the study of mendelian inheritance, especially since the discovery that hereditary units, or genes, can be rearranged by X-ray bombardment. Hitherto X-raying has had to be done on living animals, but through Dr. Gottschewski's technique it is now possible to apply the X-rays directly to the germ-plasm itself outside the body without involving any other tissues and thereby perhaps obtaining confused results.

The technique also makes possible